**What is claimed is:**

1. An assembly of beam splitters, comprising:

a roof-prism, comprising a first emitting/receiving surface, a roof surface and a first reflecting surface, when a beam of first wavelength enters the roof-prism through the first emitting/receiving surface, the beam of first wavelength is sequentially reflected by the first reflecting surface, the roof surface and the first emitting/receiving surface and leaves the roof-prism from the first reflecting surface;

a triangle prism, comprising a second emitting/receiving surface, a second reflecting surface and a total internal reflecting surface, wherein the beam of first wavelength from the roof-prism enters the triangle prism through the total internal reflecting surface, and is sequentially reflected by the second reflecting surface and the total internal reflecting surface and leaves the triangle prism from the second emitting/receiving surface; and

a complementary prism, which is adjacent to the second reflecting surface of the triangle prism, and comprises a third emitting/receiving surface and a fourth emitting/receiving surface;

wherein a beam of second wavelength enters the complementary prism through the third emitting/receiving surface and passes the second reflecting surface to enter the triangle prism, and then the beam of second wavelength is emitted from the second emitting/receiving surface of the triangle prism by reflecting by the total internal reflecting surface, so that the optical axis of the beam of second wavelength and the optical axis of the beam of first wavelength are coaxial; and

wherein a beam of third wavelength enters the complementary prism through the fourth emitting/receiving surface and passes the second reflecting surface to enter the triangle prism, and then the beam of third wavelength passes the first reflecting surface to enter the roof-prism and is sequentially reflected by the first emitting/receiving surface, the roof surface and the first reflecting surface so as to emit from the first emitting/receiving surface of the roof-prism, so that the optical axis of the beam of third wavelength and the optical axis of the beam of first wavelength are coaxial.

2. The assembly of beam splitters as claimed in claim 1, wherein the beam of first wavelength is reflected by the second reflecting surface, and the beam

of second wavelength and the beam of third wavelength travel through the second reflecting surface

3. The assembly of beam splitters as claimed in claim 1, wherein the second emitting/receiving surface and the total internal reflecting surface form a 48□ included angle, the second emitting/receiving surface and the second reflecting surface form a 108° included angle, the second reflecting surface and the total internal reflecting surface form a 24° included angle, the third emitting/receiving surface and the fourth emitting/receiving surface form a 132° included angle, the fourth emitting/receiving surface form a 132° included angle, and the third emitting/receiving surface and the second reflecting surface form a 24° included angle.

4. The assembly of beam splitters as claimed in claim 1, wherein the beam of second wavelength enters the second emitting/receiving surface of the triangle prism and is reflected to the complementary prism by the total internal reflecting surface, so as to emit from the third emitting/receiving surface of the complementary prism;

and the beam of third wavelength passes the first emitting/receiving surface and is sequentially reflected by the first reflecting surface, the roof surface and the first emitting/receiving surface, and then the beam of third wavelength travels through the triangle prism to enter the complementary prism, so that the beam of third

wavelength is emitted from the fourth emitting/receiving surface.

5. An assembly of beam, comprising:

a triangle prism comprising a second emitting/receiving surface, a second reflecting surface and a total internal reflecting surface, wherein a beam of first wavelength enters the triangle prism through the second emitting/receiving surface and is sequentially reflected by the total internal reflecting surface and the second reflecting surface, so as to emit from the total internal reflecting surface;

a roof-prism comprising a first emitting/receiving surface, a roof surface and a first reflecting surface, wherein the beam of first wavelength from the triangle prism enters the roof-prism through the first reflecting surface, and is sequentially reflected by the first emitting/receiving surface, the roof surface and the first reflecting surface, so as to emit from the first emitting/receiving surface; and

a complementary prism, which is adjacent to the second reflecting, and comprises a third emitting/receiving surface and a fourth emitting/receiving surface;

wherein a beam of second wavelength enters the complementary prism through the third emitting/receiving surface and passes the

second reflecting surface to enter the triangle prism, the beam of second wavelength is reflected by the total internal reflecting surface and emitted from the second emitting/receiving surface of the triangle prism, so that the optical axis of the beam of second wave-length and the optical axis of the beam of first wavelength are coaxial; and

wherein a beam of third wavelength enters the complementary prism through the fourth emitting/receiving surface and passes the second reflecting surface to enter the triangle prism, the beam of third wavelength passes the first reflecting surface to enter the roof-prism and is sequentially reflected by the first emitting/receiving surface, the roof surface and the total internal reflecting surface and emitted from the first emitting/receiving surface of roof-prism, so that the optical axis of the beam of third wavelength and the optical axis of the beam of first wavelength are coaxial.

6. The assembly of beam splitters as claimed in claim 5, wherein the beam of first wavelength is reflected by the second reflecting surface, and the beam of second wavelength and the beam of third wavelength passes through the second reflecting surface.

7. The assembly of beam splitters as claimed in claim 5, wherein the second emitting/receiving surface

and the total internal reflecting surface form a 48□ included angle, the second emitting/receiving surface and the second reflecting surface form a 108° included angle, the second reflecting surface and the total internal reflecting surface form a 24° included angle, the third emitting/receiving surface and the fourth emitting/receiving surface form a 132° included angle, the fourth emitting/receiving surface and the second emitting/receiving surface form a 132° included angle, and the third emitting/receiving surface and the second reflecting surface form a 24° included angle.

8. The assembly of beam splitters as claimed in claim 5, wherein the beam of second wavelength enters the triangle prism through the second emitting/receiving surface and is reflected to the complementary prism by the total internal reflecting surface, so as to emit from the third emitting/receiving surface of the complementary prism; and

the beam of third wavelength enters the roof-prism through the first emitting/receiving surface and is sequentially reflected by the first reflecting surface, the roof surface and the first emitting/receiving surface, and then the beam of third wavelength travels through the triangle prism to enter the complementary prism, so that the beam of third wavelength is emitted from the fourth emitting/receiving surface.

9. A rangefinder for measuring the distance between user and a target, comprising:

a viewing/emitting optical system, comprising

a first object lens, receiving an image produced from the target;

an assembly of beam splitters as claimed in claim 1, wherein the image following the path of the beam of first wavelength is incident on the first emitting/receiving surface and emits from the second emitting/receiving surface;

an ocular lens, which receives the image from the assembly of beam splitters and let user see the target;

an emitter, emitting an invisible beam toward the fourth emitting/receiving surface of the assembly of beam splitters, wherein the invisible beam following the path of the beam of third wavelength is emitted from the first emitting/receiving surface, and passes the first object lens to travel toward the target; and

a display, emitting a narrow-band beam toward the third emitting/receiving surface of the assembly of beam splitters and shows the distance, wherein the narrow-band beam following the path of the beam of second wavelength is emitted from the second emitting/receiving surface, and shown for user by the ocular lens; and

a receiving optical system, comprising

a second object lens, receiving the invisible beam reflected from the target; and

a detector, receiving the invisible beam passing through the second object lens.

10. The rangefinder as claimed in claim 9, said emitter is a laser diode.

11. The rangefinder as claimed in claim 9, said display is a liquid crystal display, a LED display or an OLED display.

12. A rangefinder for measuring the distance between user and a target, comprising:

an emitting optical system, comprising

an emitter, emitting an invisible beam; and

a second object lens, guiding the invisible beam to the target; and

a viewing/receiving optical system, comprising

a first object lens, receiving an image produced from the target and the invisible light reflected from the target;

an assembly of beam splitters as claimed in claim 1, wherein the image following the path of the beam of first wavelength is incident on the first emitting/receiving surface and emits from the second emitting/receiving surface, and the invisible beam following the path of the beam of third wavelength is incident on the first emitting/receiving surface and emits from the fourth emitting/receiving surface;

an ocular lens, which receives the image from the assembly of beam splitters and let user see the target;

a detector, receiving the invisible beam from the fourth emitting/receiving surface; and

a display, emitting a narrow-band beam toward the third emitting/receiving surface of the assembly of beam splitters and shows the distance, wherein the narrow-band beam following the path of the beam of second wavelength is emitted from the second emitting/receiving surface, and shown for user by the ocular lens.

13. The rangefinder as claimed in claim 12, said emitter is a laser diode.

14. The rangefinder as claimed in claim 12, said display is a liquid crystal display, a LED display, or an OLED display.

15. A rangefinder for measuring the distance between user and a target, comprising:

a viewing/emitting optical system, comprising

a first object lens, receiving an image produced from the target;

an assembly of beam splitters as claimed in claim 5, wherein the image flowing the path of the beam of first wavelength is incident on the second emitting/receiving surface and emitted from the first emitting/receiving surface;

an ocular lens, which receives the image from the assembly of beam splitters and let user see the target;

an emitter, emitting an invisible beam toward the third emitting/receiving surface of the assembly of beam splitters, wherein the invisible beam following the path of the beam of second wavelength is emitted from the second emitting/receiving surface, and passes the first object lens to travel toward the target; and

a display, emitting a narrow-band beam toward the fourth emitting/receiving surface of the assembly of beam splitters and shows the distance, wherein the narrow-band beam following the path of the beam of third wavelength is emitted from the first emitting/receiving surface, and shown for user by the ocular lens; and

a receiving optical system, comprising

a second object lens, receiving the invisible beam reflected from the target; and

a detector, receiving the invisible beam passing through the second object lens.

16. The rangefinder as claimed in claim15, said emitter is a laser diode.

17. The rangefinder as claimed in claim 15, said display is a liquid crystal display, a LED display, or an OLED display.

18. A rangefinder for measuring the distance between user and a target, comprising:

an emitting optical system, comprising

an emitter, emitting an invisible beam; and

a second object lens, guiding the invisible beam to the target; and

a viewing/receiving optical system, comprising

a first object lens, receiving an image produced from the target and the invisible light reflected from the target;

an assembly of beam splitters as claimed in claim 5, wherein the image following the path of the beam of first wavelength is incident on the second emitting/receiving surface and emits from the first emitting/receiving surface, and the invisible beam following the path of the beam of second wavelength is incident on the second emitting/receiving surface and emits from the third emitting/receiving surface;

an ocular lens, which receives the image from the assembly of beam splitters and let user see the target;

a detector, receiving the invisible beam from the third emitting/receiving surface; and

a display, emitting a narrow-band beam toward the fourth emitting/receiving surface of the assembly of beam splitters and shows the distance, wherein the narrow-band beam following the path of the beam of third

wavelength is emitted from the first emitting/receiving surface, and shown for user by the ocular lens.

19. The rangefinder as claimed in claim 18, said emitter is a laser diode.

20. The rangefinder as claimed in claim 18, said display is a liquid crystal display, a LED display, or an OLED display.